

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A ceramic envelope for a high intensity discharge lamp made of a light transmission ceramic ceramic material, comprising:

a cylindrical barrel section forming an electric discharge light emitting space;
an annular closing section that closes both end each end of the said barrel section, respectively; and

a capillary section for inserting and fixing an electric discharge electrode to be outwardly protruded so as to be opposed to each other extending from a substantial center substantially central position of both each said annular closing section; wherein the a barrel section thickness of at least one of the boundary sections section between both of the said barrel section and each said annular closing section is continuously increased at a ratio from 1.2 to 2.0 relevant relative to the a thickness of said barrel section in the vicinity of the a center of the electrical said electric discharge light emitting space.

2. (Currently Amended) A ceramic envelope for a high intensity discharge lamp made of a light transmission ceramic ceramic material, comprising:

a cylindrical barrel section forming an electric discharge light emitting space;
an annular closing section that closes both ends each end of the said barrel

section, respectively; and

a capillary section for inserting and fixing an electric discharge electrode to be outwardly protruded so as to be opposed to each other extending from a substantial centersubstantially central position of both each said annular closing section; wherein a ratio of an inner diameter of said barrel section, in the vicinity of an end of said barrel section, to an inner diameter of the a center of the said barrel section is equal to or greater than at least 0.8 and is less than 1.0.

3. (Currently Amended) A ceramic envelope for a high intensity discharge lamp made of a light transmission ~~ceramies~~ceramic material, comprising:

a cylindrical barrel section forming an electric discharge light emitting space; an annular closing section that closes both endeach end of the said barrel section, respectively; and

a capillary section for inserting and fixing an electric discharge electrode to be outwardly protruded so as to be opposed to each other extending from a substantial centersubstantially central position of both each said annular closing section;

wherein a surface roughness Ra of the an interior surface of said barrel section is in a range of 0.01 μm to 0.4 μm , and the an additive concentration in the vicinity of the said interior surface of said barrel section is $\frac{1}{2}$ or less of that in the vicinity of the center of the thickness.

4. (Currently Amended) A ceramic envelope for a high intensity discharge lamp made of a light transmission ceramic material, comprising:

a cylindrical barrel section forming an electric discharge light emitting space; an annular closing section that closes both ends each end of the said barrel section, respectively; and

a capillary section for inserting and fixing an electric discharge electrode to be outwardly protruded so as to be opposed to each other extending from a substantial center substantially central position of both each said annular closing sections section;

wherein the a barrel section thickness of at least one of the boundary sections section between both of the said barrel section and each said annular closing section is continuously increased at a ratio from 1.2 to 2.0 relevant relative to the a thickness of said barrel section in the vicinity of the a center of an said electric discharge light emitting space, and a ratio of a diameter of said barrel section, in the vicinity of an end of the said barrel section, to a diameter of the a center of the said barrel section is equal to or greater than at least 0.8, and is less than 1.0.

5. (Currently Amended) A-The ceramic envelope for a high intensity discharge lamp as claimed in claim 1, wherein the a surface roughness Ra of the an interior surface of the said barrel section is from in a range of 0.01 μm to 0.4 μm , and the an additive concentration of the surface of said barrel section is $\frac{1}{2}$ or less of that in the vicinity of the center of the thickness.

6. (Currently Amended) A-The ceramic envelope for a high intensity discharge lamp as claimed in claim 3, wherein an-said additive consists of at least one or more kinds of Sc_2O_3 , MgO , ZrO_2 , Y_2O_3 , and lanthanoid based rare earth oxideoxides.

7. (Currently Amended) A-The ceramic envelope for a high intensity discharge lamp as claimed in claim 2, wherein the-a surface roughness Ra of the-an interior surface of the-said barrel section is from-in a range of 0.01 μm to 0.4 μm , and the-an additive concentration of the surface of said barrel section is $\frac{1}{2}$ or less of that in the vicinity of the center of the thickness.

8. (Currently Amended) A-The ceramic envelope for a high intensity discharge lamp as claimed in claim 4, wherein the-a surface roughness Ra of the-an interior surface of the barrel section is from-in a range of 0.01 μm to 0.4 μm , and the-an additive concentration of the surface of said barrel section is $\frac{1}{2}$ or less of that in the vicinity of the center of the thickness.

9. (Currently Amended) A-The ceramic envelope for a high intensity discharge lamp as claimed in claim 5, wherein an-said additive consists of at least one or more kinds of Sc_2O_3 , MgO , ZrO_2 , Y_2O_3 and lanthanoid based rare earth oxide oxides.

10. (Previously Added) A-The ceramic envelope for a high intensity discharge lamp as claimed in claim 7, wherein an-said additive consists of at least one or more kinds of Sc_2O_3 , MgO , ZrO_2 , Y_2O_3 and lanthanoid based rare earth-oxide oxides.

11. (Currently Amended) A-The ceramic envelope for a high intensity discharge lamp as claimed in claim 8, wherein an-said additive consists of at least one or more kinds of Sc_2O_3 , MgO , ZrO_2 , Y_2O_3 and lanthanoid based rare earth-oxide oxides.